

**INTENTION TO ADOPT ICT AMONG SMEs IN KELANTAN:
A STUDY OF PASAR SITI KHADIJAH**

**By
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ABSTRAK

Tesis ini mengkaji tentang kecenderungan untuk mengguna pakai Teknologi Maklumat dan Komunikasi (ICT) di kalangan Perusahaan Kecil Sederhana (PKS) di Kelantan kerana ada dikalangan pengusaha yang masih belum didedahkan dengan pengaplikasian teknologi di dalam aktiviti perniagaan. Sebagai tulang belakang kepada pertumbuhan ekonomi dan memainkan peranan yang penting dalam mewujudkan peluang pekerjaan, PKS perlu dibantu oleh semua pihak untuk meningkatkan kecekapan dalam menjalankan perniagaan. Oleh itu, penggunaan teknologi ICT dalam aktiviti perniagaan adalah tindakan terbaik supaya PKS boleh menjalankan perniagaan dengan lancar. Tujuan utama kajian ini adalah untuk menentukan apakah faktor yang paling penting yang mempengaruhi niat untuk menggunakan ICT di kalangan PKS di Kelantan. Reka bentuk penyelidikan kuantitatif telah diguna pakai untuk mengumpul data, ujian hipotesis, dan jawapan persoalan kajian. Sebanyak 180 soal selidik telah diedar kepada pemilik dan pengurus PKS di Pasar Siti Khadijah, dan 152 telah dikembalikan. Dapatan kajian menunjukkan bahawa tanggapan kepenggunaan, persepsi kemudahan penggunaan dan pengaruh luar mempunyai hubungan yang positif yang mempengaruhi niat untuk menggunakan ICT di kalangan PKS. Oleh itu, hasil kajian ini menyediakan penyelesaian terhadap permasalahan yang dihadapi oleh PKS dan cadangan untuk kerajaan supaya dapat melaksanakan ICT dengan jayanya.

ABSTRACT

This thesis is about the intention of adopting Information and Communication Technology (ICT) among SMEs in Kelantan because they are among the people who are lagging behind in terms of adopting technologies in their business activities. As the backbone of the economy growth and played a vital role in creating employment opportunities, SMEs needs to be helped by all parties in order to increase the efficiency in conducting business. Thus, adopting an ICT into business activities is the best action so that SMEs can attain a lot of benefits in terms of running business smoothly. The main purpose of this study is to determine what is the most important factors that influence the intention to adopt ICT among SMEs in Kelantan. A quantitative and survey research design was adopted to collect data, test hypotheses, and answer research questions in the study. A total of 180 questionnaires were sent to SME owner/managers in Pasar Siti Khadijah, and 152 were returned. The finding of the study revealed that perceived usefulness and perceived ease of use had a positive relationship that influence the intention to adopt ICT among SMEs. Furthermore, the results of the study may provide solutions and recommendations for SMEs and governments to successfully implement ICT.

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LIST OF ABBREVIATIONS

B2B	Business to Business
B2C	Business to Customer
CRM	Customer Relationship Management
EAI	Enterprise Application Integration
ERP	Enterprise Resource Planning
ICT	Information & Communication Technology
IS	Information system
IT	Information Technology
JPY	Japanese Yen
KM	Knowledge Management
KRW	Korean Won
MYR	Malaysia Ringgit
PEOU	Perceived Ease of Use
PHP	Philippine Peso
PKS	Perusahaan Kecil Sederhana
PU	Perceived Usefulness
RPM	Rapid Prototyping and Manufacturing
SCM	Supply Chain Management
SGD	Singapore Dollar
SMEs	Small Medium Enterprises
TAM	Technology Acceptance Model
THB	Thailand Baht
TPB	Theory of Planned Behaviors

TRA Theory of reasoned Action

CHAPTER 1

BACKGROUND OF STUDY

1.0 Introduction

The Information & Communication Technology (ICT) is playing a vital role in today's business life. Adopting new technologies, exploiting new software, and adopting new innovations to the business are assisting organization to increase efficiency and expand business towards internationalization. Globalization and digitalization have changed the way business is conducted and how it stay alive in the industry and also in the marketplace. Thus, it can be said that internet technologies have been used broadly especially for a variety of business purposes since it can create a lot of opportunities for a new business (Muhammad& Shah, 2007).

ICT refers to technologies that offers access to information via telecommunications. ICT defined as any technology used to support information gathering, processing, distribution and use (Beckinsale and Ram, 2006). Nowadays , acquiring ICT to support business needs regardless of business type and size, is a significant requirement to utilize the potential of information technology (IT) (Hashim, 2007). Since the emergence of ICT has affected many industries and organizations, government has take actions by putting an enormous emphasize on ICT in order to enhance the competitiveness among Malaysian towards the current technology.

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References

- Al-Gahtani, S.S. (2004), "Computer technology acceptance success factors in Saudi Arabia: an exploratory study", *Journal of Global Information Technology Management*, Vol. 7 No. 1, pp. 5.
- Beckinsale, M. and Ram, M. (2006), "Delivering ICT to ethnic minority businesses: an action- research approach." *Environment and Planning C: Government and Policy* 24(6), pp.847 – 867.
- Benamati, J. and Rajkumar ,T.M. (2002), "A design of an empirical study of the applicability of the Technology Acceptance Model to Outsourcing Decisions". pp. 52-54.
- Blackburn, R. and Athayde, R. (2000)," Making the connection: The effectiveness of Internet training in small businesses, *Education and Training*", 42(4/5), pp.289-299.
- Caldeira, M. and Ward. (2002), "Understanding the successful adoption and use of IS/IT in SMEs: an explanation from Portuguese manufacturing industries", *Information Systems Journal*, Vol. 12 No. 2, pp. 121-52.
- Chaston, I., Badger, B.,Sadler-Smith, E., and Mangles, T. (2001), "E-commerce: An opportunity to Examine Organizational Learning in Process", *International Journal of Small Business*, Vol. 19, No. 2, pp. 13 – 30.
- Conner, J.K. and Sterling. A. (1995), " Testing hypothesis of functional relationships: A comparative survey of correlation", *American Journal of Botany*, Vol. 82, No.11,pp.1399-1406.
- Dave. (2012). Pilot Test in research methodology?
Retrieved from
http://wiki.answers.com/Q/Pilot_testing_in_research_methodology
- Davis, F. (1989, "Perceived usefulness, perceived ease of use, and user acceptance of information technology", *MIS Quarterly*, pp 319-340.

- Davis, F., Bagozzi, R. P., & Warshaw, P. R. (1989), “ User acceptance of computer technology: A comparison of two theoretical models”, *Manage. Sci.* 35, 8, 982–1003.
- Fishbein, M. and Ajzen, I. (1975), “Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research”, Reading, MA: Addison-Wesley.
- Hashim, J.(2007), “ Information Communication technology (ICT) adoption among SME owners in Malaysia”, *International Journal of Business and Information*, Vol. 2,No.2, pp. 221-240.
- Kotelnikov ,V. (2007).Small and medium enterprise and ICT. Asia Pacific development programme (UNDP-APDIP), pp 1-12.
- Lu.J., Yu, C.S., and Yao, J.E. (2003), Electronic Networking, application and Policy, Vol.3 No.3,pp.206-222.
- Lucchetti, R. and Sterlacchini, A. (2004), “The adoption of ICT among SMEs: evidence from an Italian survey”, *Small Business Economics*, Vol. 23, pp. 151-68.
- Malaysia Economic Monitor .(2010), Retrieved from
http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0CCIQFjAB&url=http%3A%2F%2Fsitesources.worldbank.org%2FINTMALAYSIA%2FResources%2F3243921303882224029%2Fmalaysia_ec_monitor_apr2011_ch2.pdf&ei=GY4WT5zJDMbOrQfA-og_&usg=AFQjCNHGmZZmisbgZRcZsL_M4igPgZ0ptg
- Malaysia, Utusan Malaysia, 70 peratus pengusaha IKS ‘buta’ IT, June 19,2002,pp.29.
- Martin L. M. and Matlay H. (2001). “Blanket approaches to promoting ICT in small firms: Some lessons from the DTI ladder adoption model in the UK”, *Internet Research*, Vol.11 (5), pp. 399-410.
- Modimogale, L. and Kroeze, H. J. (2011), “The role of ICT within Small and Medium Enterprises in Gauteng”, *IBMA Publishing*, Vol. 2011, pp.1-12.
- Moore, G. C. and Benbasat, I. (1991),“Development of an instrument to measure the perceptions of adopting an information technology innovation,” *Information Systems Research* (2:3), pp. 192-221

Muhammad,G.K. and Shah, B.(2007), “E-Buisness in Pakistan: Opportunities and threats”, *Journal of Internet Banking and Commerce*, Vol. 12, No.3. Retrieved from <http://www.arraydev.com/commerce/jibc/>

Pollard,C.E. and Hayne, S.C. (1998), “The changing face of information system in small firms, *International small business journal*”, Vol.63 No.16, pp.71-87.

Ritchie, B. and Brindley, C. (2005), “ICTAdoption by SMEs: Implications for Relationships and Manageme, *New Technology, Work and Employment*”, Vol. 20 No.3,pp. 205-217.

Salahuddin, N. and Izza. (2007), “The Adoption of Electronic Data Interchange (EDI) among Small-Medium-Enterprises (SMEs)in Klang Valley”, *Universiti Teknologi Mara*,pp. 1-12.

Sekaran, U. and Bougie, R. (2009), “Research method for business: A skill building approach.(5th ed), John Wiley & Sons Ltd.

Selamat, Z., Jaafar, N., and Kadir, H.(2011), “ICT adoption in Malaysian SMEs”, *International Conference on Management and Service Science IPEDR*, Vol.8,pp 135-138.

Sirarak, S., Islam. N., and Khang. D.D. (2010), “Does ICT enhance hotel performance”, *Journal of Hospitality and Tourism Technology*, Vol. 2 No.1 pp.34-49.

SME Corp Malaysia. (2011), Categories of MSEs in Malaysia. Retrieved from <http://www.smecorp.gov.my/v4/>

Straub, D., Loch, K., and Hill, C. (2001), “Transfer of information technology to the Arabic world: A test of cultural influence modelling”, *Journal of Global Information Management*, Vol. 9 No. 4, pp. 6-28.

Suruhanjaya Komunikasi dan Multimedia Malaysia (2011), “Opportunities for all in broadband ICT - an initiative to drive growth in and through the Communications & Multimedia (C&M) industry”, Retrieved from http://www.google.com.my/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CEYQFjAA&url=http%3A%2F%2Fwww.skmm.gov.my%2FAttachment%2FSpeakers%2520Presentation%2520on%2520Broadband%2520ICT%2FZeti%2520M_SKMM.pdf&ei=NxHET_j8O4_LrQfph7G7CQ&usg=AFQjCNGqYHlIB3QkFoOL16_jpcgMI_fFbQ

Tavakol, M. and Dennick, R. (2011), “Making sense of Cronbach’s alpha”, *International Journal of Medical Education*, Vol.2, pp 53-55.

Turahanov, A. (2010), “Antecedent factors that influence e-business adoption by SMEs in Changloon” ,pp. 9-54.

The economic planning unit prime minister department (2010), Tenth Malaysia plan. at http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0CCYQFjAB&url=http%3A%2F%2Fwww.pmo.gov.my%2Fdokumenattached%2FRMK%2FRMK10_Mds.pdf&ei=1pQWT5_ZIoLZrQfvos1t&usg=AFQjCNF2eJjuVuzvjgqctboMnlc1VUNS6A

Malaysia, Utusan Malaysia, Kemiskinan di Kelantan semakin tinggi December 21st, June 19, 2010, pp. 13.

Vickery, G., Sakai, K., Lee, I and Sim, H., (2004), “ ICT, e-business and SMEs. Organisation for economic co-operation and development”, pp. 8-43.

Wiki Books (2008), “ Small and Medium Enterprises and ICT/Concepts and Definitions”, Retrieved from http://en.wikibooks.org/wiki/Small_and_Medium_Enterprises_and_ICT/Concept_and_Definitions

Yahoo. United Kingdom and Ireland (2010). What are the benefits of ICT to a small business. Retrieved from <http://uk.answers.yahoo.com/question/index?qid=20100517033415AAatGgU>;

Yusof, M.N.H., Yaacob, M.R., and Ibrahim, M.D. (2010), “Business advisory: A study on selected micro-sized SMEs in Kelantan, Malaysia”, *International Journal of Marketing Studies*, Vol . 2, No.2, pp 245-252.